

**Qualitative Project-level Hotspot Analysis in
PM10 and PM2.5 Nonattainment and
Maintenance Areas**

Section II: Transportation Conformity Requirements

Section II Overview

- What projects require a PM hotspot analysis?
 - What is a project of air quality concern?
 - Q&As; Examples
- When is project level conformity required?
- What are the conformity requirements?
- What are the roles and responsibilities of stakeholders?

What projects are subject to a PM hotspot analysis?

Federal Projects...

- ✓ Within a PM nonattainment or maintenance area
- ✓ Not exempt under either 40 CFR 93.126 or 93.128
- ✓ Fit criteria under 40 CFR 93.123(b)(1) – projects of air quality concern...



Federal projects are those that are federally funded or require federal approval.

What projects are subject to PM hotspot analysis? (con't)

Projects of Air Quality Concern are...

- (i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;**
- (ii) Projects affecting LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volume from a significant number of diesel vehicles related to the project;**
- (iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;**
- (iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and**
- (v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission as appropriate, as sites of violation or possible violation**

40 CFR 93.123(b)(1)

What projects are subject to PM hotspot analysis? (con't)

- The final rule and the March 2006 guidance provide examples of projects of air quality concern...
 - A project on a new highway that serves a significant volume of diesel truck traffic such as >125,000 AADT and 8% or more diesel truck traffic
 - New exit ramps to connect a highway to a major freight terminal
 - A new major bus terminal
 - And more
- And, projects that are **not** an air quality concern...
 - A new highway project that primarily serves gasoline vehicles
 - Intersection channelization or interchange reconfiguration project involving turn lanes or other operational improvements
 - A new compressed natural gas bus terminal
 - And more

What projects are subject to PM hotspot analysis? (con't)

- **Projects not listed under 40 CFR 93.123(b)(1) as projects of concern are NOT required to have a hotspot analysis.**
 - These projects are presumed to meet Clean Air Act requirements without explicit hotspot analysis.

Projects of Air Quality Concern Q&As

? Are the examples of projects of air quality concern in the hotspot rule the only examples? Or can other cases apply?

✓ Those examples are not exclusive. Interagency consultation can be used to determine if the project is of air quality concern according to the rule's definition.

? What percentage of total trucks should be considered diesel trucks?

✓ In areas where truck volume data is not easily disaggregated, total truck volume could be used. Interagency consultation should be used to discuss data and the appropriate ways to categorize diesel vehicles.

PM2.5 Project-Level Conformity and Hot-Spot Analyses Frequently Asked Questions (<http://www.fhwa.dot.gov/environment/conformity/pm25faqs.htm>)

10. Are the examples in the preamble to the March 10, 2006 rule (71 FR 12491) the only projects that are of air quality concern or can other cases apply?

The examples in the preamble are not exclusive and are not intended to cover all cases. If a particular project does not fit any of the examples, interagency consultation should be used to determine if the project is of air quality concern as defined in 40 CFR 93.123(b)(1).

11. What percentage of total trucks should be considered diesel trucks? Can total trucks be used instead?

As discussed in the preamble to the March 10, 2005 rule (71 FR 12491), PM2.5 and PM10 hot-spot analyses are targeted to projects that involve a significant number of or a significant increase in diesel vehicles. In areas where truck volume data may not easily be disaggregated, total truck volumes could be used. Interagency consultation should be used to discuss data and the appropriate way to categorize diesel vehicles.

Projects of Air Quality Concern Q&As

- ? For the example of 125,000 AADT and 8% diesel trucks, is this the existing levels, the open-to-traffic levels, or the design year levels?
- ✓ **The example could apply to any of these years. The hotspot analysis should examine the year(s) during the timeframe of the plan in which the project's emissions, in addition to background levels, are expected to be the highest.**
- ? For this same example, what if the project's AADT is high enough that a truck percent less than 8 still yields the equivalent total trucks as the example? Is this still a project of air quality concern?
- ✓ **Yes. The same would also hold true for a project with lower AADT but higher truck percent. However, remember that this example is to illustrate a typical project of air quality concern and should not be treated as a threshold.**

PM2.5 Project-Level Conformity and Hot-Spot Analyses Frequently Asked Questions

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12. For the example of 125,000 AADT and 8% diesel trucks, is this the existing levels, the open-to-traffic levels, or the design year levels?

The example could apply to any of these scenarios. In some cases, there may be existing violations which must not be worsened, so the existing traffic levels may be applicable. As discussed in the preamble to the July 1, 2004 rule (69 FR 40057), the hot-spot analysis should examine the year(s) during the time frame of the plan in which project emissions, in addition to background regional emissions in the project area, are expected to be the highest. In some cases, this may be when the project opens to traffic, but in other cases may be the design year or another year where peak emissions are anticipated.

13. One of the examples of a “project of air quality concern” from the preamble to the March 10, 2006 rule (71 FR 12491) is “a project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more of such AADT is diesel truck traffic.” This amounts to a truck AADT of 10,000. Could a project on a new highway that has a truck AADT of 10,000 also be an example of a “project of air quality concern,” regardless of the total AADT or percentage of diesel trucks?

Yes. A project that has a truck AADT of 10,000 would also be an example of a “project of air quality concern.” For example, a project may have a diesel truck percentage less than 8%, but the over AADT is higher than 125,000, resulting in over 10,000 diesel truck AADT. Also, a project may have an AADT less than 125,000, but a truck percentage over 8%, resulting in over 10,000 diesel truck AADT. It is important to note that the examples were included in the preamble to the March 10, 2006 final rule to illustrate a typical project of air quality concern. The numbers included in the examples should not be interpreted as required thresholds.

Projects of Air Quality Concern Q&As

- ? Would any nonexempt project on a facility with 125,000 AADT and 8% diesel trucks be a “project of air quality concern”? Or only a project that significantly increased the number of diesel vehicles on such a facility?
- ✓ 40 CFR 93.123(b)(1) should be interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on an existing highway facility. The 125,000 AADT and 8% diesel trucks example is intended for new facilities, not as an example of a “significant increase.”

PM2.5 Project-Level Conformity and Hot-Spot Analyses Frequently Asked Questions (<http://www.fhwa.dot.gov/environment/conformity/pm25faq.htm>)

13. Would any nonexempt project on a facility with 125,000 AADT and 8% diesel trucks be a “project of air quality concern,” or would only a project that significantly increased the number of diesel vehicles on such a facility be a “project of air quality concern?”

As discussed in the examples in the preamble to the March 10, 2006 rule (71 FR 12491), 40 CFR 93.123(b)(1)(i) should be interpreted as applying only to projects that would involve a significant increase in the number of diesel transit busses and diesel trucks on an existing highway facility. The example of 125,000 AADT and 8% diesel trucks is intended for new facilities, not as an example of a “significant increase.” This is consistent with 93.123(b)(1)(iv) which defines projects of air quality concern based on a significant increase the number of diesel vehicles due to terminal or transfer project expansion. A “significant increase” in the number of diesel transit busses and diesel trucks under either 40 CFR 93.123(b)(1)(ii) or (iv) would need to be determined through interagency consultation.

Summary: Three Types of Projects

- Exempt projects and non-federal projects:
 - no project-level conformity determination required
- Projects of air quality concern:
 - project-level conformity determination required, including hotspot analysis
- Nonexempt projects not of air quality concern:
 - project-level conformity determination still required, but no hotspot analysis needed
 - Should document that project is not of type in 40 CFR 93.123(b)(1)

Exempt projects. Exempt projects are those listed in 40 CFR 93.126 and traffic signal synchronization projects under 40 CFR 93.128. These projects are exempt from project-level conformity, and PM project-level conformity determinations are not required.

Projects of local air quality concern. Projects of air quality concern are those types of projects that are listed in 40 CFR 93.123(b)(1). PM project-level conformity determinations that meet all applicable criteria (see 40 CFR 93.109) are required for these types of projects, and they must include a hot-spot analysis.

Nonexempt projects that are not of local air quality concern. This would include projects that are not of the type listed in 40 CFR 93.123(b)(1), but are also not exempt. PM project-level conformity determinations that meet all applicable criteria (see 40 CFR 93.109) are required for these types of projects, but they do not have to include a hot-spot analysis. The project-level conformity determination should document that the project is not of type identified in 40 CFR 93.123(b)(1), and EPA has determined that such projects meet the Clean Air Act's requirements without any further hot-spot analysis.

When is a PM hotspot analysis required?

PM2.5 Areas:

- For a project level conformity determination that is made on or after April 5, 2006

PM10 Areas*:

- Prior to April 5, 2006, project-level conformity determinations must meet the previous rule's requirements
- On or after April 5, 2006, project-level conformity determinations would follow the amended rule (in areas without approved conformity SIPs)

***PM10 areas with approved conformity SIPs must continue to follow the procedures in the SIP until it is amended.**



When is PM2.5 project-level conformity required for projects already under development or construction?

- If a project or a portion of a project still requires FHWA approval or authorization, then PM2.5 conformity would be required before the first action that occurs on or after April 5, 2006.
- For any phase of a multi-phase project, the hotspot analysis should focus on the portions of the project area not already under construction or not completed and require a new FHWA approval or authorization.



How does the release of the guidance affect projects in PM10 areas with hotspot analyses already underway?

- A PM10 hotspot analysis started prior to the release of the new guidance may be completed according to the 2001 guidance.

What are the requirements for assessing impacts?

- ✓ Hotspot analyses must demonstrate that:
 - No new local PM violations will be created
 - The frequency or severity of existing violations will not be increased as a result of the project
- ✓ Project-level conformity determinations must address both the annual and 24-hour PM_{2.5} and/or PM₁₀ standards, regardless of which form of the standard the area has violated.

(40 CFR 93.116)

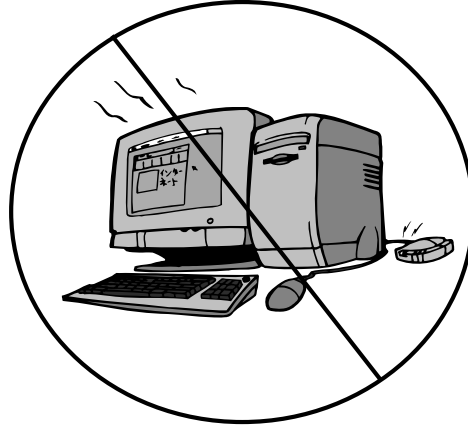
A reasoned and logical explanation of why a hotspot will not be created or worsened is provided for project-level conformity determinations.

The hotspot analysis assesses potential new or worsened future violations due to the project in combination with changes in background air quality concentrations.

The interagency consultation process should be used to determine if new violations or increases in frequency or severity of existing violations are anticipated based on the hotspot analysis.

What are the requirements for assessing impacts? (con't)

Until EPA releases modeling guidance for a quantitative analysis, the demonstration to meet 40 CFR 93.116 must be based on qualitative consideration of local factors.



[40 CFR 93.123(b)(2) and (b)(4)]

What are the requirements for interagency consultation?



The interagency consultation process is an important tool in completing project-level conformity determinations and hotspot analyses, as required by 40 CFR 93.105, such as

- evaluate and choose method(s) and assumptions used in the qualitative analysis.

The consultation process may be used to:

- determine if a project meets requirements for a project of air quality concern (40 CFR 93.123(b)(1))
- determine whether new violations or increases in frequency or severity of existing violations is anticipated.

What are the roles and responsibilities of different agencies in project-level conformity determinations?

EPA

- Promulgating conformity regulations and guidance
- Member of interagency consultation
- Provides policy and technical support

FHWA/FTA

- Make conformity determinations
- Review and approve NEPA documents
- Member of interagency consultation
- Provide policy and technical support

What are the roles and responsibilities of different agencies in project-level conformity determinations?

Project Sponsor

- Providing hotspot analysis
- Meeting consultation requirements
- Conducting environmental analyses to comply with NEPA

State and Local Agencies

- Part of interagency consultation
- Aid in air quality/transportation modeling
- State air agency develops SIPs and operates monitors

The project sponsor is the agency implementing the project, typically local government, transit operator, or state DOT.

What are the roles and responsibilities of different agencies in project-level conformity determinations?

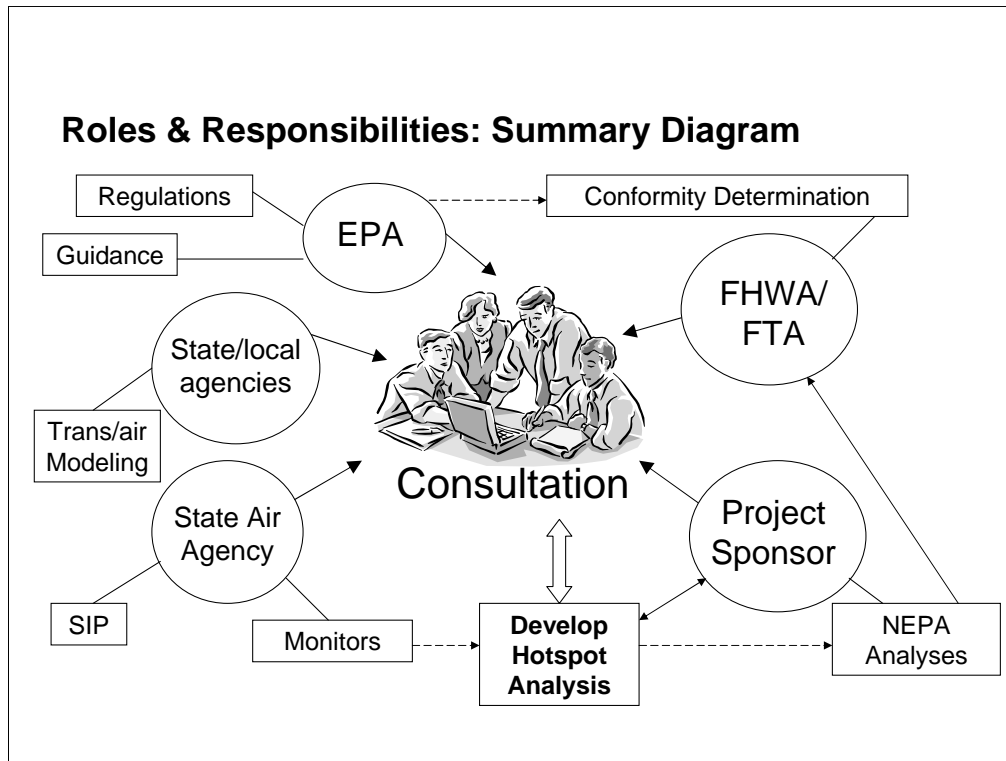
MPO

- Involvement for specific project-level conformity determinations is not defined by conformity regulations
- Interagency consultation should be used to discuss the role of MPOs in project-level determinations
- MPO data may be valuable in hotspot analyses, particularly regarding regional transportation and traffic conditions and emissions

PM2.5 Project-Level Conformity and Hot-Spot Analyses Frequently Asked Questions
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9. How must the MPO be involved in interagency consultation for project-level conformity determinations?

Under 40 CFR 93.105, MPOs must be involved in the establishment of interagency consultation procedures for project-level conformity determinations. However, the extent of MPO involvement in any specific project-level determination is not defined by the transportation conformity regulation. Interagency consultation should be used to discuss the role of the MPO in project-level conformity determinations. In addition, the MPO data may be valuable in hotspot analyses, especially regarding regional transportation and traffic conditions and emissions.



This diagram does not represent a prescribed set of responsibilities or present a flowchart of actions and interrelationships. It presents a visual representation of the types of activities that various agencies may undertake as part of the interagency consultation, hotspot analysis, and project-level conformity determination process. Actual relationships, activities, and roles will vary by location, where not required by law.

What are the requirements for public participation?



Affected agencies making project level conformity determinations need to establish a proactive public involvement process.

✓ Public review & comment

Since hotspot analyses are often conducted as part of NEPA, the NEPA public involvement process can often be used to satisfy this requirement.

Public Involvement Q&As

- ? How should the public involvement criteria be met for a project-level conformity determination not being made as part of the initial NEPA process?
 - ✓ Project sponsors must provide an opportunity for public review and comment of project-level conformity analyses for projects of air quality concern. Interagency consultation should be used to determine the extent of public involvement necessary to satisfy 40 CFR 93.105(e). Consideration should be given to the scale and scope of the analysis supporting the determination.
 - ✓ For projects not of air quality concern, a comment period is only required for project-level conformity determinations if such a comment period would have been required under NEPA.

Public Involvement Q&As (con't)

- ? If a list of projects that are not of air quality concern is made available to the public in advance of the initial NEPA process, does this satisfy the public involvement requirement for later project-level conformity determinations?
 - ✓ Yes. The list must be discussed through interagency consultation, the projects specifically described, with a short explanation of why the project is not of air quality concern.
 - ✓ Interagency consultation should be used to determine the level of detail and extent of public involvement necessary to satisfy 40 CFR 93.105(e) for the list of projects.